

Ecolabel Summary- Televisions
April 21, 2008

TELEVISIONS	TCO Development (Sweden)	Nordic Swan (Denmark, Iceland, Finland, Norway, and Sweden)	Eco-Flower (European Union)
ENVIRONMENTAL CRITERIA	http://www.tcodevelopment.com/tco-development1200/Datorer/TCO06/TCOF1076_TCO06_Media_Displays_1_2	http://www.svanen.nu/Default.aspx?tabName=CriteriaDetailEng&menuItemID=7056&por=71	
Document Version	TCO '06 Media Displays, Ver. 1.2, 16 August, 2006	Version 2.3 • 19 March 2003 – 31 December 2009	COMMISSION DECISION of 25 March 2002 establishing the ecological criteria for the award of the Community eco-label to televisions (notified under document number C(2002) 1142) (2002/255/EC)
1. Promote Toxics Reduction		NOTE: all toxics restrictions do not apply to plastics in printed circuit boards or electronic components attached to printed circuit boards.	
<i>Cadmium</i>	The FPD and peripheral equipment shall not contain cadmium, mercury and hexavalent chromium. The requirement applies to components, parts, and raw materials in all assemblies and sub-assemblies of the product.	Must not be added to plastics CRT-displays: Cadmium shall not be added to the picture tube.	Prohibited in plastics.
<i>(Hexavalent) Chromium</i>	Exempted are mercury lamps in background lighting systems. Other exemptions are to be found in the TCO'03 Guidelines and are in accordance with EU Directive 2002/95/EC (RoHS). The limit values for lead, mercury and hexavalent chromium is 0.1 % by weight and for cadmium 0.01 % by weight in homogeneous materials.		
<i>Lead</i>	The total amount of mercury in the lamps shall be declared.	Must not be added to plastics	Prohibited in plastics.
<i>Mercury</i>	The limit values for flame retardants is 0.1 % by weight in homogeneous materials. Exempted are laminates for printed wiring boards, PWBs.	The background illumination for flat displays must not contain more than 1 mg of mercury per lamp (average value). For LCD-displays the applicant shall provide a test report stating the average	Maximum 3 mg in LCD monitors.
<i>Flame retardants</i>	Plastic parts weighing more than 25 grams shall not contain flame retardants that contain bromine or chlorine. The requirement applies to plastic parts in all assemblies and subassemblies of the product. The FPD and peripheral equipment shall not contain PBB and PBDE (listed in the TCO'03 Guidelines). The requirements apply to components, parts and raw materials in all assemblies and sub-assemblies of the product. The limit values for flame retardants is 0.1 % by weight in homogeneous materials. Exempted are laminates for printed wiring boards, PWBs. Material specifications shall be provided for plastic parts and PWB laminates that weigh more than 25 grams and which have flame retardant concentrations above 0.5 percent by weight.	Halogenated flame retardant must not be added to the plastics. Other flame retardants added to the plastics shall be specified with CAS-number. Other flame retardants added to plastic parts (>25 g) can not be assigned any of the following risk phrases: R 45 (may cause cancer), R46 (may cause heritable genetic damage), R60 (may impair fertility) or R61 (may cause harm to the unborn child), in accordance with Council Directive 67/548/EEC and its subsequent amendments	plastic parts heavier than 25 grams shall: — not contain the following flame retardants: decabromodiphenyl ether 13654-09-6 monobromodiphenyl ether 101-55-3 dibromodiphenyl ether 2050-47-7 tribromodiphenyl ether 49690-94-0 tetrabromodiphenyl ether 40088-47-9 pentabromodiphenyl ether 32534-81-9 hexabromodiphenyl ether 36483-60-0 heptabromodiphenyl ether 68928-80-3 octabromodiphenyl ether 32536-52-0 nonabromodiphenyl ether 63936-56-1 decabromodiphenyl ether 1163-19-5 chloroparaffins with chain length 10-13 C atoms, chlorine content > 50 % by weight, 85535-84-8 Plastic parts shall not contain flame retardant substances or preparations containing substances, that are assigned or may be assigned, at the time of application, any of the risk phrases R45 (may cause cancer), R46 (may cause heritable genetic damage), R50 (very toxic to aquatic organisms), R51
<i>Chlorinated plastics</i>	Plastic parts that weigh more than 25 grams shall not contain chlorine or bromine as a part of the polymer. Laminates for printed wiring boards, PWBs and all kinds of cable insulation are exempted.	Chlorinated plastics are not permitted with the exception of electrical components	
<i>Batteries</i>		in circuit boards.	
<i>Other</i>	Noise: FPDs equipped with fans and "all-in-one computers" shall fulfil the requirements regarding noise found in the latest version of the labelling document for Desktop computers. This document can be found on the TCO Development home page (www.tcodevelopment.com)		

Note: RoHS restricts the marketing of electronic products containing Mercury, Lead, Cadmium, Hexavalent Chromium, PBB, and PBDEs, with the following exceptions: certain levels of mercury are allowed in certain fluorescent lamps; certain levels of lead in CRTs, electronic components, fluorescent tubes; certain levels of lead as an alloy of steel, aluminum, or copper; lead in high melting solder, solder in servers, storage, or storage array systems, solder in network infrastructure equipment; chromium plating, hexavalent chromium as an anti-corrosion agent in certain cooling systems. Deca-BDE is currently exempt pending results of a review.

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2. Resource Consumption & Recycled Content			
<i>Recycled material in unit</i>			
<i>Biobased material</i>			
<i>Easily recyclable materials</i>		90% of plastic and metal parts (by weight) must be recyclable.	90% of plastic and metal parts (by weight) must be recyclable. 90 % (by weight) of the glass used in a cathode ray tube shall be technically recyclable.
<i>Reused or remanufactured material</i>			
3. Promote Energy Efficiency			
<i>Meets Energy Star requirements⁴</i>	Meets the new Energy Star 4.0 Tier 1 requirements on sleep mode and off mode (except for CRTs in off mode, where ES has ≤ 2 W and TCO has ≤ 3 W). No "active mode" requirements as in ES, but a declaration of "active" or "on mode" power consumption is required (as in TCO).		Yes
<i>Other energy requirements</i>	Beyond Energy Star: The maximum power consumption in Stand by mode shall be ≤ 1 W.	The television shall have an off-switch. The off-switch shall be clearly visible. The passive stand-by energy consumption of the television shall be at a maximum 1 watt. For televisions, which have an integrated digital receiver/decoder (IRD), the active stand-by consumption shall be at a maximum 9 watts. The television shall have an on-mode energy efficiency index (E1) which is lower than 75 % of the base-case	
<i>Efficient power supplies</i>			
<i>Must explain energy-saving features to users</i>	There shall be a description, from the user's point of view, of how the display is brought into its energy mode(s) and how this is indicated on the display. An energy declaration and an explanation of power indication shall be included in the	Yes	Yes
4. Promote Lifecycle Extension			
<i>Unit</i>		The manufacturer shall offer a commercial guarantee to ensure that the product will function for at least two years.	The manufacturer shall offer a commercial guarantee to ensure that the television will function for at least two years. This guarantee shall be valid from the date of delivery to the customer.
<i>Modular design</i>			
<i>Spare parts and upgrade components</i>		The availability of compatible electronic replacement parts shall be guaranteed for 7 years from the time that the production ceases.	The availability of compatible electronic replacement parts shall be guaranteed for 7 years from the time that production
5. Design for Recovery			
<i>Label components</i>	Plastic parts that weigh more than 25 grams shall be material-coded in accordance with ISO 11469 and ISO 1043-1, -2, -3, -4. Such parts shall be listed in the table at Section A.6.2.4. Exempted are laminates for printed	Plastic parts (>25 g) must be marked in accordance with ISO 11469.	Plastic parts (>25 g) must be marked in accordance with ISO 11469. Excluded from this criterion are extruded plastic materials and the light-guide of flat panel displays.
<i>No glued or welded connections</i>	For mercury lamps in Flat Panel Displays, gluing and welding (metal to plastics) must not be used to bond parts and make removal of the lamps complicated. Molded-in or glued metal parts are not accepted in plastic components	The use of hazardous materials shall be avoided (for a definition of hazardous waste, see Annex III, WEEE-directive). If this is not possible, hazardous components must be easy to separate from the appliances.	Incompatible and hazardous materials shall be separable
<i>Needs no special tools to disassemble</i>	Connections to be separated during the disassembly of Flat Panel Displays must be easy to take apart in order to not damage the mercury lamps	The maximum dismantling time must not exceed 15 minutes for TV/VCR-combinations and 10 minutes for other appliances	Yes
<i>No metallic varnish, paint, or lacquer</i>	There shall be no internal or external metallization of the FPD outer plastic casing and foot	Plastic parts (>25 g) must not be painted with varnishes that reduce the recyclability. All varnishes used for plastic parts (>25 g) shall be	Plastic parts shall contain no metal inlays that cannot be separated;

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<i>Minimization of different materials</i>	No more than two different types of plastic materials are accepted for parts weighing more than 100 grams in each product unit. The light guide in FPD panels are exempted.		plastic parts shall be of one polymer or compatible polymers, except for the cover, which shall consist of no more than two types of polymers which are separable;
6. End of Life Management			
<i>Take-back</i>	Manufacturer only required to have recycling contracts in at least one U.S. state	For each ecolabeled unit sold, manufacturer must offer the recycling of an equivalent used product free-of-charge.	The manufacturer shall offer, free of charge, the take-back for recycling of the product, and for any component being replaced, except for items contaminated by users.
<i>Must explain end-of-life management options to users</i>	The brand name holder (or his representative, associated company or affiliate) shall inform its customers in the user's manual of the possibility to dispose of the FPD by environmentally acceptable recycling. The information shall be made available to customers in the various geographical markets in the following way: 1. For FPDs sold in Europe: In the countries within the European Union where the FPD is sold and where the EU directive 2002/96/EC (WEEE) is applicable. 2. For FPDs sold in Asia: In at least one Asian country where the FPD is sold. 3. For FPDs sold in America (North and South): In at least one country	Yes	Take-back as well as explain other environmental aspects of products.
<i>Handling of e-waste</i>		65 % by weight of the materials used in the appliance, shall be recyclable, in	
<i>Export of e-waste</i>			
<i>Social Standards for workers</i>			
7. Corporate Requirements			
<i>Reduce waste</i>			
<i>Conserve water</i>			
<i>Conserve energy</i>			
<i>Ozone Depleting chemicals in manufacturing+A6</i>			
<i>Worker conditions</i>		The holder of an ecolabelling licence is responsible for ensuring that the production of ecolabelled products complies with applicable provisions on safety, working conditions, environmental legislation and plant specific conditions/concessions in the country of production.	
<i>Community Right to Know</i>			An environmental declaration shall accompany the product and shall be available to the user. This document shall be in conformity with the recommendations of ECMA's Technical Report 70 'Product-related environmental attributes'.
<i>Supply Chain Standards</i>			
<i>Environmental management system</i>	Each manufacturing plant where the final assembly of the product is made must be certified in accordance with ISO 14001, or EMAS registered. If the product is manufactured by a third party, it is this company that shall be certified or registered.		
8. Packaging			
<i>Recycled material</i>			
<i>Recyclability of material</i>			
<i>Eliminate toxics</i>			
<i>Other?</i>		The manufacturer or importer of the ecolabelled product shall ensure the compliance to national legislation/regulations or industry-specific agreements concerning the recycling of products and packages.	
Manufacturer/Model Availability	Several hundred products are labelled - no way to know how many are TVs.	0 products registered	~40 products, all Sharp

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